

AMENDMENTS TO THE SPECIFICATION:

Please replace paragraph [0001] with the following amended paragraph.

The following U.S. patent application publications are fully incorporated herein by reference: U.S. Patent Application Publication No. 2002/0102610 ("Automated Identification of Peptides"); and U.S. Patent Application Publication No. 2003/0027216 ("Analysis of Proteins from Biological Fluids Using Mass Spectrometric Immunoassay").

Please add the following new paragraph after paragraph [0021].

As used herein, the term "cartoon" means a symbolic representation of a particular row from an associated monosaccharide table.

Please replace paragraph [0025] with the following amended paragraph.

In Figure 1, glycan identification system 100 includes both program and memory components. Program component 110, the marketable program, constructs a monosaccharide set table, described in greater detail with reference to Figure 4, which is saved in memory file 150. The monosaccharide set table is composed of potential glycans generated by using all possible sets of monosaccharides within a range set by the experimenter. Each row of the table contains a set of potential glycan isomers, its theoretical mass, and the probability of each isotopes. Each row of the monosaccharide table represents a set of glycan isomers, i.e., the different isomers that are comprised of that particular set of monosaccharides. For example, a row of the table could be 5 HexNAcs and 4 Hexoses, which has a mass of 2111.06 daltons. The identification component 120 reads monosaccharide set table 150 and a spectrum file from the spectrum receiver 105 and develops a listing of peaks in the spectrum that match a row from the monosaccharide table, and saves it in peak identification file 160.

Please replace paragraph [0028] with the following amended paragraph.

The cartoon dictionary 180 is a compiled set of symbolic representations of glycan isomers used to identify peaks on a spectrum. The dictionary includes a ~~cartoons, or symbolic representations, for most rows from of the monosaccharide set table., with each cartoon represented as a drawing,~~ Each cartoon ~~which~~ may have

associated program code. While some rows in the table will not have a cartoon, others may have more than one, as is illustrated in Figure 2. In this example the isomer with 5 HexNAcs and 4Hexoses might have the two cartoons 210 and 220, respectfully.

Please replace paragraph [0029] with the following amended paragraph.

In developing the cartoon dictionary ~~470~~ 180, an initial set of cartoons is loaded into the dictionary by the user. From these initial archetypes, the dictionary is expanded using a set of rules ~~are used to generate a much larger set.~~ These rules specify the combinations that result in isomers of the same glycan. Therefore, each archetype can generate multiple cartoons for the dictionary. These rules may be structured such that they rarely generate a biosynthetically implausible cartoon. For example, two sample rules are

“A NeuAc can always be replaced buy a NeuGc” and “If there is a single fructose at the reducing end of a glycan, it can always be removed.”